

Site: Shiloh Church Road Site

Task: Excavation, Pesticide Removal

Date: 9/26/19

Predicted Predominant Wind Direction: West

Predicted Maximum Wind Speed: 10 mph



Ludlum 3030 Serial Number:	187982	Cal Due Date:	2/19/2020
Th-230 4π efficiency:	0.3244	Tc-99 4π efficiency:	0.3155
Pu-239 4π efficiency:	0.3996	C-14 4π efficiency:	0.0679
Am-241 4π efficiency:	0.3452	Sr-90 4π efficiency:	0.4264

Notes: AC-5 assigned to Excavation Team.

Radionuclide Air Sampling
Daily Summary
Shiloh Church Road Site
Halifax County, Virginia

Date: 9/26/19	Predicted Predominant Wind Direction: West
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Public Results

Effluent Limits	Alpha (Ra-226)	9.00E-13	Beta (Pb-210)	6.00E-13
Air Sampler Location	% Of Effluent Concentration Limit	Alpha Result (μCi/mL)	% Of Effluent Concentration Limit	Beta Result (μCi/mL)
Perimeter-1 - East perimeter	<1.87%	3.47E-15	<90.40%	1.24E-14

Worker Results

Derived Air Concentrations	Alpha (Ra-226)	3.00E-10	Beta (Pb-210)	1.00E-10
Tasks Monitored	% Of Derived Air Concentration	Alpha Result (μCi/mL)	% Of Derived Air Concentration	Beta Result (μCi/mL)
AC-5 - Excavation Team	<0.09%	-9.96E-14	<8.97%	-4.13E-12

Comments:

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Air Sampling Unit: F&J LV-1

Calibrator Serial: 3067

Cal Due Date: 1/21/20

Calibrator Serial: 3067					Cal Due Date: 1/21/20			α isotope of concern		Ra-226	β isotope of concern			Pb-210	
Pre Flow Rate (LPM)		79.9					Post Flow Rate (LPM)			76.4					
Start Date/Time		9/26/19 8:10					Stop Date/Time			9/26/19 17:13					
						Total Liters			40012.8						
Analysis Date/Time		Hours After Collection	Bkg count time (min)	Sample count time (min)	α bkg (counts)	gross α (counts)	net α (cpm)	α MDA (μCi/mL)	α (μCi/mL)	β bkg (counts)	gross β (counts)	net β (cpm)	β MDA (μCi/mL)	β (μCi/mL)	
10/1/19 12:00		114.8	120	60	84	48	0.1	1.68E-14	3.47E-15	4625	2317	0.08	5.42E-13	1.24E-14	
Final Result		Hours After Collection	Bkg count time (min)	Sample count time (min)	α bkg (counts)	gross α (counts)	net α (cpm)	α MDA (μCi/mL)	α (μCi/mL)	β bkg (counts)	gross β (counts)	net β (cpm)	β MDA (μCi/mL)	β (μCi/mL)	
10/1/19 12:00		114.8	120	60	84	48	0.1	1.68E-14	3.47E-15	4625	2317	0.08	5.42E-13	1.24E-14	
								% Eff Criteria:	<1.87%				% Eff Criteria:	<90.40%	

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Air Sampling Unit: AirCheck XR5000 AC-5

Dry Cal Serial: 132112

Cal Due Date: 7/11/20

Dry Cal Serial: 132112					Cal Due Date: 7/11/20				α isotope of concern			Ra-226	β isotope of concern			Pb-210	
Pre Flow Rate (LPM)	4.652				Post Flow Rate (LPM)				4.902								
Start Date/Time	9/26/19 8:35				Stop Date/Time				9/26/19 16:43								
					Total Liters				2206.9								
Analysis Date/Time	Hours After Collection	Bkg count time (min)	Sample count time (min)	α bkg (counts)	gross α (counts)	net α (cpm)	α MDA (μCi/mL)	α (μCi/mL)	β bkg (counts)	gross β (counts)	net β (cpm)	β MDA (μCi/mL)	β (μCi/mL)				
10/2/19 10:55	138.2	120	80	88	46	-0.16	2.79E-13	-9.96E-14	4641	2984	-1.38	8.97E-12	-4.13E-12				
Final Result	Hours After Collection	Bkg count time (min)	Sample count time (min)	α bkg (counts)	gross α (counts)	net α (cpm)	α MDA (μCi/mL)	α (μCi/mL)	β bkg (counts)	gross β (counts)	net β (cpm)	β MDA (μCi/mL)	β (μCi/mL)				
10/2/19 10:55	138.2	120	80	88	46	-0.16	2.79E-13	-9.96E-14	4641	2984	-1.38	8.97E-12	-4.13E-12				
							% DAC:	<0.09%					% DAC:	<8.97%			

Notes: Assigned to Excavation Team.